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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,746	07/10/2001	Yoshinori Takahashi	36856.526	8463

7590 09/17/2004
KEATING & BENNETT LLP
Suite 312
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Fairfax, VA 22030

EXAMINER

NGUYEN, HIEP

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,746

Applicant(s)

TAKAHASHI, YOSHINORI

Examiner

Hiep Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-7 is/are allowed.
- 6) ☒ Claim(s) 8,10-15 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the RCE dated 07-27-04 and the amendment filed on 06-17-04.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 10-15 and 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and /or clarification is required.

Regarding claim 8 the recitation “openings” on line 6 is indefinite because it is not clear what it is. Assume that the “opening” is the rectangular hole (32) and then there is only one opening. The recitation “**one** of the openings is **aligned** with the through hole and **another of the openings** is aligned with the microstrip line” is indefinite because it is misdescriptive. As discussed above, figure 2 of the present application shows **only one** opening (32) and this opening (32) is not aligned with any through hole. The Applicant is requested to point out the number of openings in the drawing and to show how these openings are aligned with the through hole and the microstrip line. The recitation “the opening **aligned with the through hole...the opening aligned with the microstrip line**” is indefinite because figure 2 of the present application shows **only one** opening (32).

Regarding claim 10, the recitation “at least one of the openings” is indefinite because there is only one opening (32).

Regarding claim 14, the recitation “**a** through hole formed in said dielectric layers” on line 10 is indefinite because it is not clear how **a** through hole can be formed in **many** different dielectric layers.

Claims 11-15 and 17-21 are indefinite because of the technical deficiencies of claims 8 and 14.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 10, 11, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mandai et al. (US Pat. 5,227,739).

Regarding claim 8, 10, 11, 12 and 13, figure 4 of Mandai shows a resonator comprising:

a multi-layer substrate having an upper and lower surface, and including at least two grounding conductor layers (3, 5, 7) and a plurality of dielectric layers (2a-2g), one of the at least two grounding conductor layers (3, 5) being disposed on the lower surface of the multi-layer substrate, and one of the at least two grounding conductor layers (5, 7) that is closest to said micro-strip line has rectangular openings formed therein;

a strip line (4) disposed between the at least two grounding conductor layers (3, 5);

a microstrip line (9) disposed on the upper surface of said multi-layer substrate;

and

a through hole (V1) formed in said dielectric layers to connect said strip line (4) to said microstrip line (9); wherein, the rectangular opening surrounding the through hole (V2) is aligned with through hole (V2) and the other opening surrounding through hole (V1) is aligned with the microstrip line (9). The opening surrounding through hole (V1) and the opening surrounding (V2) are spaced from each other. The opening has a rectangular shape and the strip line (4) has an U- shaped configuration. The resonator comprises only one strip line and a microstrip line (9).

Allowable Subject Matter

Claims 14, 15 and 17-21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 1 and 3-7 are allowed.

Claims 14, 15 and 17-21 would be allowable because the prior art of record (US Pat. 5,227,739) fails to teach or fairly suggest a voltage controlled oscillator comprising a through hole and an omitted portion formed on a grounding conductor layer wherein, the omitted

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portion is spaced from the through hole so that the through hole is disposed outside the omitted portion as called for in claim 14.

Claims 1 and 3-7 are allowed because the prior art of record (US Pat. 5,227,739) fails to teach or fairly suggest a resonator comprising a through hole and an omitted portion formed on a grounding conductor layer wherein, the omitted portion is spaced from the through hole so that the through hole is disposed outside the omitted portion as called for in claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

09-13-04



TUAN T. LAM
PRIMARY EXAMINER